

REMARKS/ARGUMENTS

Claims 1-11 and 26-36 are active in this application.

Support for the amendment to Claims 1 and 26 is found on page 8, lines 7-8. No new matter is added.

The publications cited in the Office Action do not describe or suggest the invention claimed. Specifically, Dower (U.S. patent no. 5,547,839) employs a fundamentally different principal for determining a sequence of a nucleic acid molecule compared to the invention claimed in the present application. In Dower, the method involves a chain terminating nucleotide moiety (see col. 3, lines 12-17) whereas in the methods claimed in the present application, the dye-labeled dNTP or NTP is labeled in such a way to permit further elongation by incorporating additional dNTPs or NTPs (labeled or un-labeled) at the 3' position of the dye-labeled dNTP or NTP. This feature of the invention is described on page 8, 6-8 and has been defined in the present claims.

In Dower, the nucleotides are blocked at the 3' position (see col. 3, lines 12-17) and may be fluorescent labels (col. 23, lines 20-22 and col. 25, lines 4-14) or other blocking moieties (col. 25, lines 35-40). Before repeating the chain elongation, the blocking group, whether it is a fluorophore or other moiety, must be removed (see col. 25, line 15-22; lines 25-34; and col. 26, lines 19-27). In contrast, since the dye-labeled dNTP or NTP is not blocked at the 3' position (permitting the addition of further nucleotides), no removal of a blocking moiety is needed.

In view of the above, Claims 1, 3, 4, 7, 8, 19, 26, 28, 29, 32, and 35 are not anticipated by Dower and as such withdrawal of the rejection under 35 U.S.C. § 102 (b) is requested.

Furthermore, Claims 5 and 30; Claims 6 and 31; and Claims 9 and 34 would not have been obvious in view of Dower combined with Mathies, Anazawa, and Caldwell.

Mathies is relied upon to provide the use of confocal fluorescence microscopy to detect fluorescent signals. Matheis does not suggest replacing the chain terminating nucleotide in Dower. Therefore, the combination of Dower and Matheis provide no description or any reasonable suggestion to employ only one type of dye-label dNTP or NTP as claimed. Withdrawal of the rejection of Claims 5 and 30 under 35 U.S.C. § 103(a) is requested.

Anazawa describe a primer extension reaction using DNA polymerase and four types of NTPs, each of which are differentially labeled (see column 6, lines 27-33 of Anazawa). Anazawa is relied upon to provide the use of lasers to disrupt the dye molecule. Anazawa does not suggest replacing the chain terminating nucleotide in Dower. Therefore, the combination of Dower and Anazawa provide no description or any reasonable suggestion to employ only one type of dye-label dNTP or NTP as claimed. Withdrawal of the rejection of Claims 6 and 31 under 35 U.S.C. § 103(a) is requested.

Caldwell is relied upon to provide the use of the specific dyes set forth in Claims 9 and 34. Caldwell does not suggest replacing the chain terminating nucleotide in Dower. Therefore, the combination of Dower and Caldwell provide no description or any reasonable suggestion to employ only one type of dye-label dNTP or NTP as claimed. Withdrawal of the rejection of Claims 9 and 34 under 35 U.S.C. § 103(a) is requested.

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For the foregoing reasons, it is respectfully submitted that this application is now in a condition for allowance. A notice of allowance for Claims 1-11 and 26-36 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, he is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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